



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

[Handwritten Signature]

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/786,379 | 02/25/2004 | Hyung-Joon Kim | YOU102 | 3388 |
| 7590 | 08/01/2006 | | EXAMINER | |
| Donald J. Perreault Grossman, Tucker, Perreault & Pfleger, PLLC 55 South Commercial Street Manchester, NH 03101 | | | CAMERON, ERMA C | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1762 | |

DATE MAILED: 08/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|-----------------|--------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/786,379 | KIM ET AL. |
| | Examiner | Art Unit |
| | Erma Cameron | 1762 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 23 May 2006.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-3,5-14 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-3, 5-14, 17 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Response to Amendment

Election/Restrictions

1. Claims 11 and 12 have been rejoined into the application. They should not have the status of “withdrawn”.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. The rejection of Claims 1- 14 and 17 under 35 U.S.C. 112, first paragraph, is withdrawn because of the amendment filed 5/23/2006.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-3 and 5-12 and 17 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) Claim 1: it is not clear if “hot rolled and pickled steel sheet” is one species or two.

b) Claim 1: it is not clear why gold requires corrosion protection.

c) Claim 17: there are no positive recitation of a coating step, even though the claim is to a “method of coating”, thus rendering the claim indefinite.

Claim Objections

6. The objection to Claims 1 and 13 is withdrawn because of the amendment filed 5/23/2006.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-3, 5-7, 9-11 and 13 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by JP 10-001786.

‘786 teaches coating galvanized steel sheets with 1-octadecanethiol (RN 2885-00-9) or other mercaptides for corrosion protection. The coating is applied by dipping, spraying or roller. The thiol compound may either be applied over a silicic acid ester/Al salt coating, or may be applied with these compounds. The thiols are applied in butyl cellosolve (a type of glycol) or water, at 5 millimoles. The sheets do not need chromating. See Abstracts and pages 4-16 of translation.

Response to Arguments

The applicant has argued that the coating is applied to a conversion coating and not to the steel. However, the claims of the instant application, notably claims 5 and 6, allow for other coatings on the metal before the thiol is applied, such as other metals or resins. This applies to the 103 arguments as well.

9. Claims 1-3, 7-8 and 10-11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by JP 57-198269.

‘269 teaches coating by dipping (i.e. immersion for 2 seconds) a partially or wholly silver-plated stainless steel into a octadecylmercaptan solution (RN 2885-00-9) in ethanol or other organic solvents for corrosion protection. The solution is 0.01-5 weight %. (see Abstracts and pages 1-8 of translation).

Response to Arguments

The applicant has argued that the steel is silver plated. However, the steel does not have to be wholly plated with silver, thus allowing the coating composition to come in contact with the steel. This applies to the 103 arguments as well.

10. The rejection of Claims 1-2, 4 and 7-11 under 35 U.S.C. 102(b) as being clearly anticipated by Scherer et al (Langmuir 13, pp 7045-7051, 1997) is withdrawn because of the amendment filed 5/23/2006.

Scherer teaches only Cu as the metal to be coated.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 12, 14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10-001786.

‘786 is applied here for the reasons given above.

‘786 does not teach that the galvanized steel was produced by electrogalvanizing, but galvanizing in general is inclusive of electrogalvanizing.

‘786 does not teach that the steel is phosphated, but phosphating steel is conventional, and it would have been obvious to one of ordinary skill in the art to have added phosphating to the steel treatment because of its known advantages.

‘786 does not teach that the immersion time is 3”-15”, but it would have been obvious to one of ordinary skill in the art to have optimized the dipping time through no more than routine experimentation.

‘786 does not teach that the steel becomes fingerprint free, but that property would be inherent to the 1-octadecanethiol coating.

13. Claims 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 57-198269.

‘269 is applied here for the reasons given above.

‘269 teaches that the immersion time is 2 seconds. This is close enough to the lower limit of 3 seconds claimed by applicant that the examiner’s position is that 2 seconds reads on the claimed 3 seconds. Moreover, it would have been obvious to one of ordinary skill in the art to have optimized the immersion time through no more than routine experimentation because immersion time is known to be an important parameter to control in a coating process.

‘269 teaches that the thiol cpd is at 0.01-5%, which overlaps with applicant’s claimed range of 1-500 mMolar.

14. The rejection of Claims 3 and 12 under 35 U.S.C. 103(a) as being unpatentable over Scherer et al (Langmuir 13, pp 7045-7051, 1997) is withdrawn because of the amendment filed 5/23/2006.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 1762

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erma Cameron whose telephone number is 571-272-1416. The examiner can normally be reached on 8:30-6:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Erma Cameron

ERMA CAMERON
PRIMARY EXAMINER

Erma Cameron
Primary Examiner
Art Unit 1762

July 27, 2006